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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/527,931

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Gaetan L. Mathieu

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03/18/2008

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EXAMINER

CHANG, RICK KILTAE

ART UNIT

PAPER NUMBER

3726

NOTIFICATION DATE

DELIVERY MODE

03/18/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/527,931	Applicant(s) MATHIEU ET AL.	
	Examiner Rick K. Chang	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 71-75,77-88 and 102-121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 71-75,77-88 and 102-121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 71-75, 77-88 and 102-121 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are numerous phrases and clauses in the claims that are vague, indefinite, and/or awkwardly and confusingly worded, and therefore, are not fully understood. The following are examples:

Claim 71, line 5: the limitation “said adjusting a shape of a surface of a first of said substrates” lacks positive antecedent basis.

Claim 71, lines 7 and 8: it is unclear whether “said surface of said first substrate” is referring to line 4 or 5, which also lacks positive antecedent basis.

Claims are ambiguous and competitors would be unable to discern the bounds of the invention.

Claim Rejections - 35 USC § 103

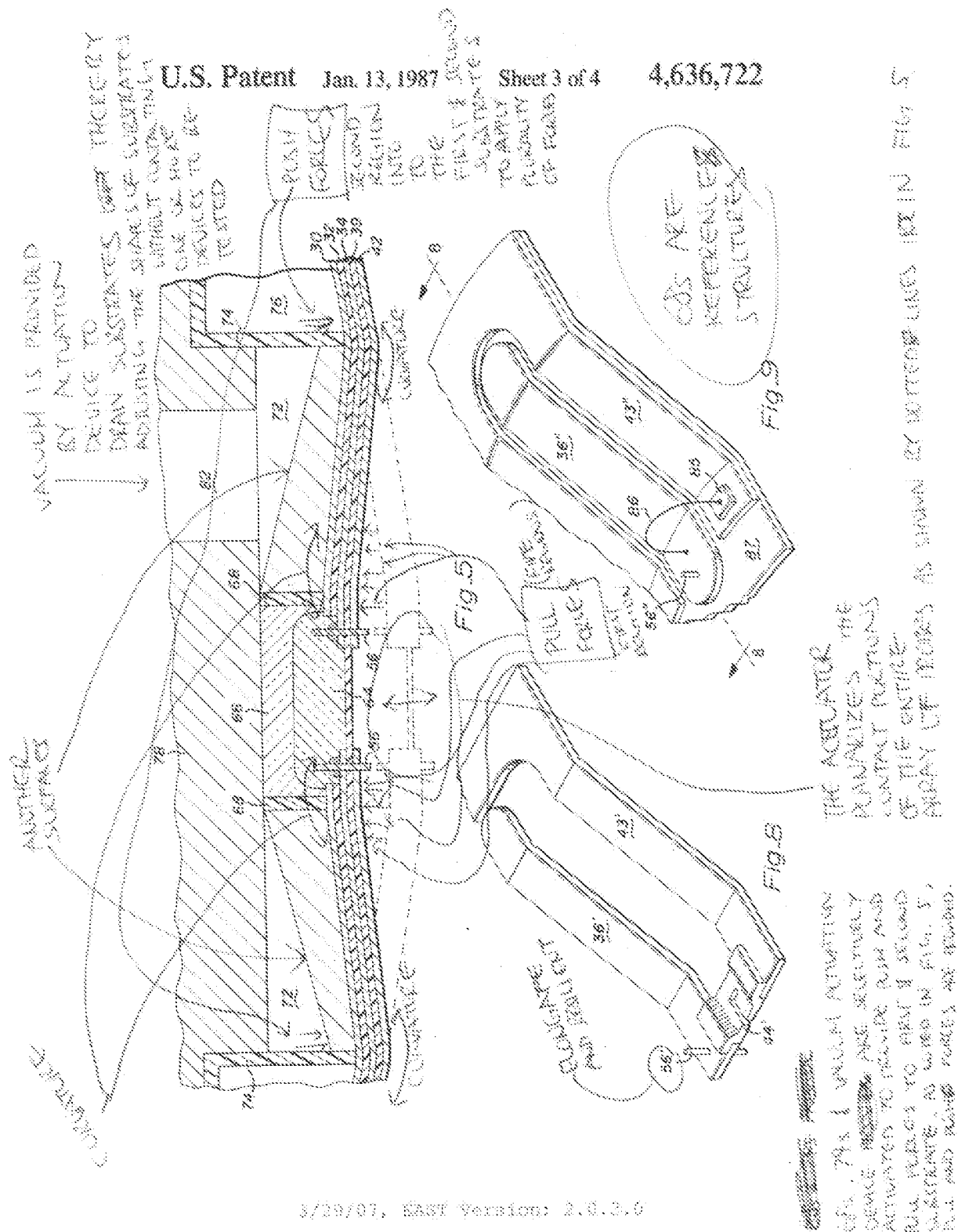
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 71-75, 77-88 and 102-121, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ardezzone (US 4,636,722) in view of Daugherty, Jr. (US 5,990,695).

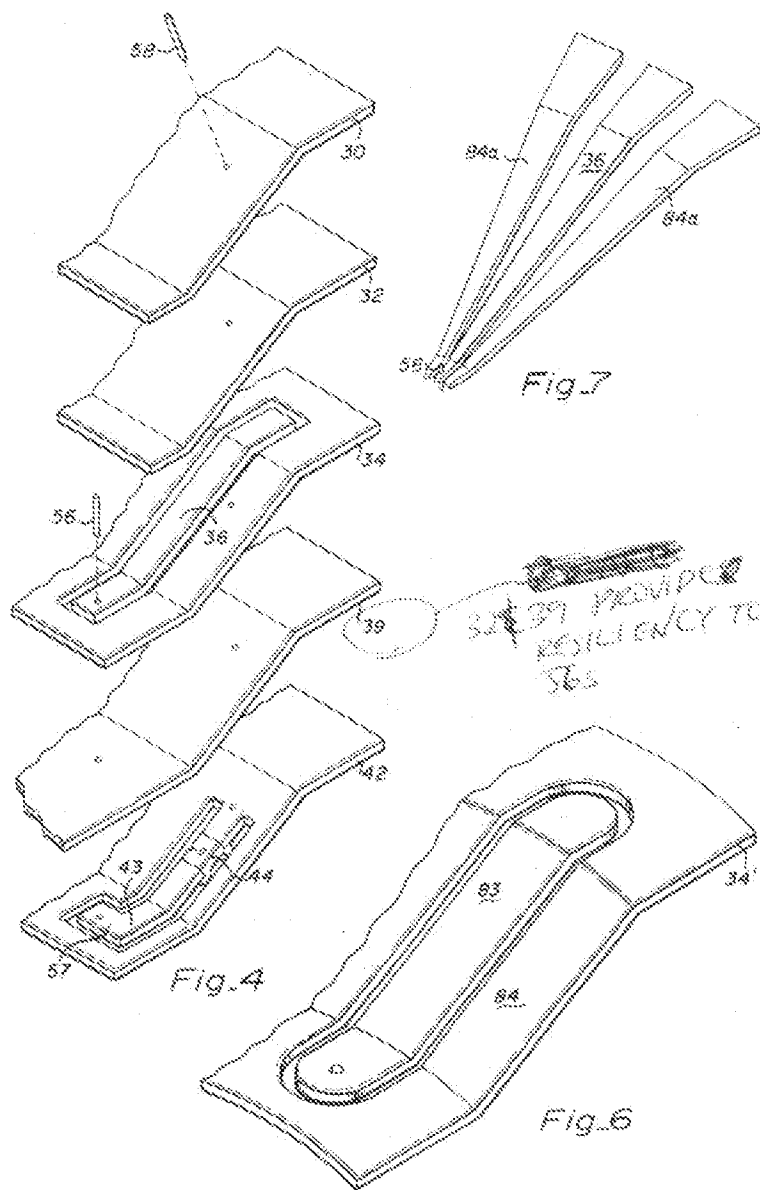
Ardezzone discloses as follows:

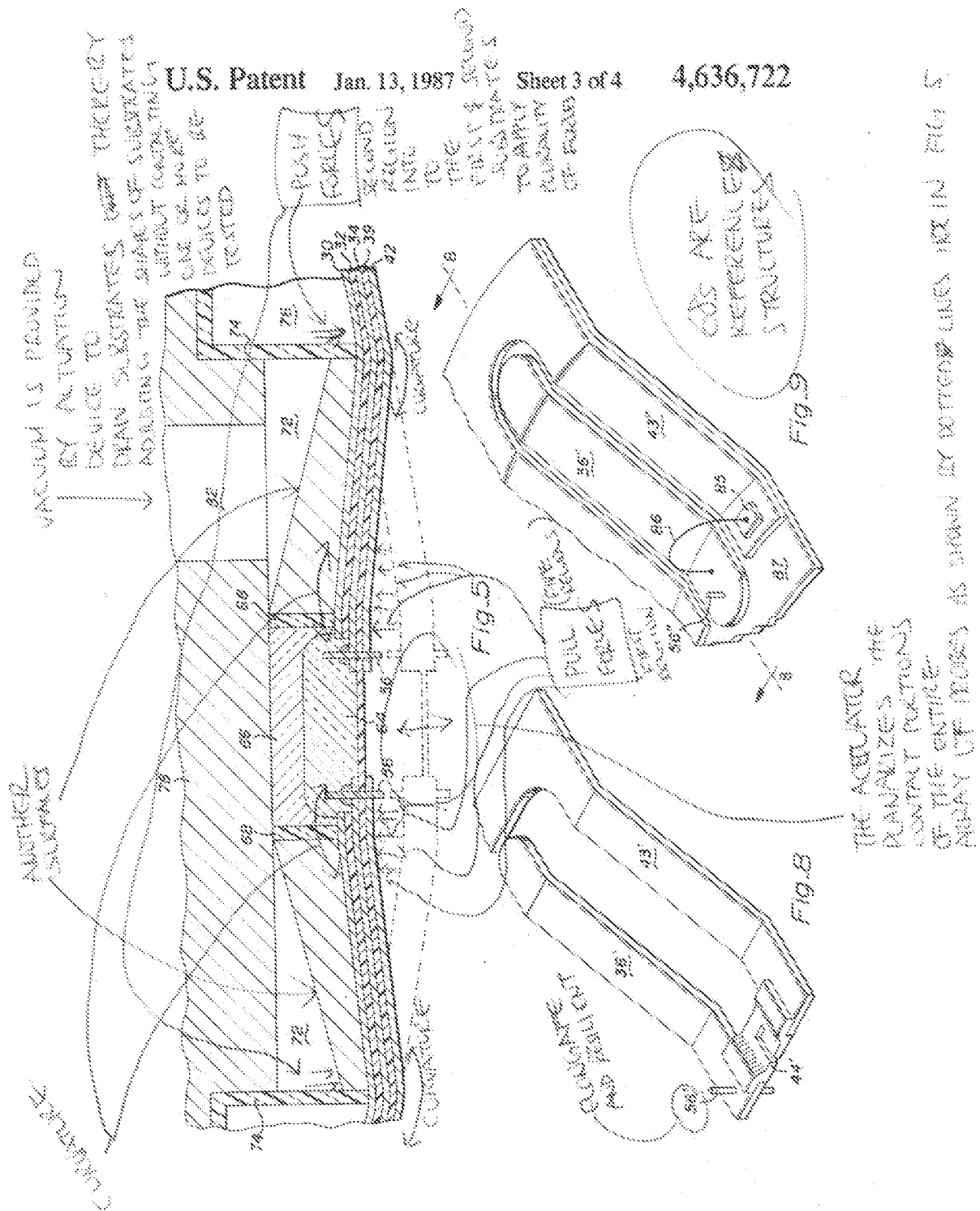


U.S. Patent Jan. 13, 1987

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4,636,722





Ardezzone fails to disclose said adjusting a shape of a surface of a first of said substrates changes a planar orientation of a contact portion of one of a first plurality of said probes attached to said surface of said first substrate relative to another one of said first plurality of probes attached to said surface of said first substrate.

Daugherty discloses said adjusting a shape of a surface of a first of said substrates changes a planar orientation of a contact portion of one of a first plurality of said probes attached to said surface of said first substrate relative to another one of said first plurality of probes attached to said surface of said first substrate (by adjusting 48s, 18s are adjusted independently to have different planar orientation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by said adjusting a shape of a surface of a first of said substrates changes a planar orientation of a contact portion of one of a first plurality of said probes attached to said surface of said first substrate relative to another one of said first plurality of probes attached to said surface of said first substrate, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 111: Ardezzone fails to disclose adjusting said shape of said surface of said first substrate and adjusting said shape of said surface of said second substrate until an overall planar orientation of contact portions of said first plurality of probes and contact portions of said second plurality of probes change from a first planar relationship relative to one another to a second planar relationship relative to one another that is different than said first planar relationship.

Daugherty discloses adjusting said shape of said surface of said first substrate and adjusting said shape of said surface of said second substrate until an overall planar orientation of contact portions of said first plurality of probes and contact portions of said second plurality of probes change from a first planar relationship relative to one another to a second planar relationship relative to one another that is different than said first planar relationship (by adjusting 48s, 18s are adjusted independently to have different planar orientation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by adjusting said shape of said surface of said first substrate and adjusting said shape of said surface of said second substrate until an overall planar orientation of contact portions of said first plurality of probes and contact portions of said second plurality of probes change from a first planar relationship relative to one another to a second planar relationship relative to one another that is different than said first planar relationship, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 112: Ardezzone fails to disclose said second planar relationship corresponds to a planar relationship of said terminals of said devices to be tested one with another.

With independent adjustment made to the probe contacts as taught by Daugherty, Fig. 5 of Ardezzone's probe contacts correspond to the second planar relationship a planar relationship of said terminals of said devices to be tested one with another, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 113: Ardezzone fails to disclose said adjusting said shape of said surface of said second substrate comprises changing a planar orientation of a contact portion of one of said second plurality of probes relative to another one of said second plurality of probes.

Daugherty discloses said adjusting said shape of said surface of said second substrate comprises changing a planar orientation of a contact portion of one of said second plurality of probes relative to another one of said second plurality of probes (by adjusting 48s, 18s are adjusted independently to have different planar orientation).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by said adjusting said shape of said surface of said second substrate comprises changing a planar orientation of a contact portion of one of said second plurality of probes relative to another one of said second plurality of probes, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 114: Ardezzone discloses a reference structure (78).

Re claim 115: Ardezzone fails to disclose said activating a plurality of actuators moves a plurality of said regions with respect to said reference structure, wherein at least one of said plurality of regions is moved toward said reference structure and at least one of said plurality of regions is moved away from said structure.

Daugherty discloses said activating a plurality of actuators (48) moves a plurality of said regions (18s) with respect to said reference structure (22), wherein at least one of said plurality of regions is moved toward said reference structure and at least one of said plurality of regions is

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moved away from said structure (by adjusting 48s, 18s are moved either toward 22 or away from 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by said activating a plurality of actuators moves a plurality of said regions with respect to said reference structure, wherein at least one of said plurality of regions is moved toward said reference structure and at least one of said plurality of regions is moved away from said structure, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 116: Ardezzone fails to disclose activating a first of said actuators to apply a pull force to a first region of said first substrate, said pull force moving said first region of said first substrate toward said reference structure; and activating a second of said actuators to apply a first push force to a second region of said first substrate, said first push force moving said second region of said first substrate away from said reference structure.

Daugherty discloses activating a first of said actuators (48 in seven o'clock orientation in Fig. 4) to apply a pull force (unscrew 48) to a first region of said first substrate (corresponding regions of 18s in Fig. 3), said pull force moving said first region of said first substrate toward said reference structure (22); and activating a second of said actuators (48 in two o'clock orientation in Fig. 4) to apply a first push force to a second region of said first substrate (corresponding regions of 18s in Fig. 3), said first push force (screw down 48) moving said second region of said first substrate away from said reference structure (22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by activating a first of said actuators to apply a pull force to a first region of said first substrate, said pull force moving said first region of said first substrate toward said reference structure; and activating a second of said actuators to apply a first push force to a second region of said first substrate, said first push force moving said second region of said first substrate away from said reference structure, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 117: Ardezzone fails to disclose said first of said actuators comprises a first differential screw assembly, and said actuating said first of said actuators comprises rotating a first screw element of said first differential screw assembly; and said second of said actuators comprises a second differential screw assembly, and said actuating said second of said actuators comprises rotating a second screw element of said second differential screw assembly.

Daugherty discloses said first of said actuators comprises a first differential screw assembly (46 and 48 in seven o'clock orientation in Fig. 4), and said actuating said first of said actuators comprises rotating a first screw element (48) of said first differential screw assembly; and said second of said actuators comprises a second differential screw assembly (46 and 48 in two o'clock orientation in Fig. 4), and said actuating said second of said actuators comprises rotating a second screw element (48) of said second differential screw assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by said first of said actuators comprises a first differential screw assembly, and said actuating said first of said actuators comprises rotating a first screw element

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of said first differential screw assembly; and said second of said actuators comprises a second differential screw assembly, and said actuating said second of said actuators comprises rotating a second screw element of said second differential screw assembly, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 118: Ardezzone fails to disclose each said actuator is configured to move a respective one of said different regions any distance in a range of distances toward or away from said reference structure.

Daugherty discloses each said actuator is configured to move a respective one of said different regions (there four different regions shown in Fig. 4 where 48 move a respective one of said different regions) any distance (the length of compressed or uncompressed spring plus the length of 48) in a range of distances toward or away from said reference structure (22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by each said actuator is configured to move a respective one of said different regions any distance in a range of distances toward or away from said reference structure, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 119: Ardezzone fails to disclose each said actuator is configured to move said respective one of said different regions independent of said other actuators.

Daugherty discloses each said actuator is configured to move said respective one of said different regions independent of said other actuators (each 48 is independent from other three 48s).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by each said actuator is configured to move said respective one of said different regions independent of said other actuators, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 120: Ardezzone fails to disclose each said actuator is configured to apply said push or said pull force to a respective one of said regions of said first substrate independent of said other actuators.

Daugherty discloses each said actuator (48s) is configured to apply said push or said pull force to a respective one of said regions of said first substrate independent of said other actuators (each 48 is independently separated to operate without dependence of other 48s).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by each said actuator is configured to apply said push or said pull force to a respective one of said regions of said first substrate independent of said other actuators, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Re claim 121: Ardezzone fails to disclose each of said actuator is configured to apply a selectable level of said push or said pull force to a respective one of said regions of said first substrate independent of said other actuators.

Daugherty discloses each of said actuator (48) is configured to apply a selectable level of said push or said pull force (by screwing the 48s in or out independently of each other) to a respective one of said regions of said first substrate independent of said other actuators (each 48 is independently separated to operate without dependence of other 48s).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ardezzone by each of said actuator is configured to apply a selectable level of said push or said pull force to a respective one of said regions of said first substrate independent of said other actuators, as taught by Daugherty, for the purpose of independently adjusting the planar orientation of each probe contact to provide better surface contact with the electronic component terminals.

Response to Arguments

5. Applicant's arguments filed have been fully considered but they are not persuasive.

The examiner maintains his rejection. For example, claim 71, line 5: the limitation "said adjusting a shape of a surface of a first of said substrates" lacks positive antecedent basis. In order to provide positive antecedent basis, the limitation "said adjusting a shape of a surface of a first of said substrates" should be amended to "said adjusting said shape of said surface of said first of said substrates".

Interviews After Final

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6. Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

Conclusion

7. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional). Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rick K. Chang/

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Primary Examiner, A.U. 3726

RC
March 16, 2008